

# MPE TEST REPORT

Report No.: SHE24060091-02DE

Date: 2024-07-12

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**Applicant** : Ehong Technology Co.,Ltd  
**Address of Applicant** : Room 501, No.485 Xingmei Road,  
Minhang Dis,Shanghai, China.

**Product Name** : BLE Module  
**Brand Name** : Ehong  
**Model Name** : EH-MC33  
**Sample Acquisition Method** : Sent by Client  
**Sample No.** : E24060091-01#05

**FCC ID** : 2ACCRM33

**Standard** : FCC Part 2.1091

**Date of Receipt** : 2024-06-28  
**Date of Test** : 2024-07-02~ 2024-07-09  
**Date of Issue** : 2024-07-12

## Remark:

*This report details the results of the testing carried out on one sample, the results contained in this report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.*

Prepared by:



(Erik Yang)

Reviewed by:



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Approved by:



(Authorized signatory: Echo Mu)

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## 1 General Information

### 1.1 Testing Laboratory

|              |                                                         |
|--------------|---------------------------------------------------------|
| Company Name | ICAS Testing Technology Service (Shanghai) Co., Ltd.    |
| Address      | No.1298, Pingan Road, Minhang District, Shanghai, China |
| Telephone    | 0086 21-51682999                                        |
| Fax          | 0086 21-54711112                                        |
| Homepage     | www.icasiso.com                                         |

### 1.2 Environmental conditions

|                                   |          |
|-----------------------------------|----------|
| Temperature (°C)                  | 18-25    |
| Humidity (%RH)                    | 40-65    |
| Barometric Pressure (mbar)        | 960-1060 |
| Ambient noise & Reflection (W/kg) | < 0.012  |

### 1.3 Details of Application

|                           |                                                             |
|---------------------------|-------------------------------------------------------------|
| Applicant Company Name    | Ehong Technology Co.,Ltd                                    |
| Address                   | Room 501, No.485 Xingmei Road, Minhang Dis,Shanghai, China. |
| Contact Person            | Rik Tang                                                    |
| Telephone                 | 02164769993                                                 |
| Email                     | rik.tang@ehonglink.com                                      |
| Manufacturer Company Name | Ehong Technology Co.,Ltd                                    |
| Address                   | Room 501, No.485 Xingmei Road, Minhang Dis,Shanghai, China. |
| Factory Company Name      | Ehong Technology Co.,Ltd                                    |
| Address                   | Room 501, No.485 Xingmei Road, Minhang Dis,Shanghai, China. |

### 1.4 Details of EUT

|                               |                                                                                                   |
|-------------------------------|---------------------------------------------------------------------------------------------------|
| Product Name                  | BLE Module                                                                                        |
| Brand Name                    | Ehong                                                                                             |
| Test Model Name               | EH-MC33                                                                                           |
| FCC ID                        | 2ACCRMC33                                                                                         |
| Mode of Operation             | Bluetooth BLE Version 5.3                                                                         |
| Frequency Range               | 2402MHz ~ 2480MHz                                                                                 |
| Modulation Type               | BLE <input checked="" type="checkbox"/> GFSK 1Mbps <input checked="" type="checkbox"/> GFSK 2Mbps |
| Max RF Output Power-Conducted | 2.713dBm                                                                                          |
| Antenna Type                  | PCB Antenna                                                                                       |
| Antenna Gain                  | 1.20dBi                                                                                           |

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|                  |      |
|------------------|------|
| Hardware Version | V1.1 |
| Software Version | V1.0 |

## 2 Maximum Permissible Exposure (MPE)

### 2.1 Limits

According to FCC Part 1.1307, systems operating under the provisions of this section shall be operated in a manner the ensures that the public is not exposed to radio frequency energy level in excess of the commission's guidelines.

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

| Frequency range (MHz)                                   | Electric field strength (V/m) | Magnetic field strength (A/m) | Power density (mW/cm <sup>2</sup> ) | Averaging time (minutes) |
|---------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| (A) Limits for Occupational/Controlled Exposure         |                               |                               |                                     |                          |
| 0.3-3.0                                                 | 614                           | 1.63                          | *100                                | 6                        |
| 3.0-30                                                  | 1842/f                        | 4.89/f                        | *900/f <sup>2</sup>                 | 6                        |
| 30-300                                                  | 61.4                          | 0.163                         | 1.0                                 | 6                        |
| 300-1,500                                               |                               |                               | f/300                               | 6                        |
| 1,500-100,000                                           |                               |                               | 5                                   | 6                        |
| (B) Limits for General Population/Uncontrolled Exposure |                               |                               |                                     |                          |
| 0.3-1.34                                                | 614                           | 1.63                          | *100                                | 30                       |
| 1.34-30                                                 | 824/f                         | 2.19/f                        | *180/f <sup>2</sup>                 | 30                       |
| 30-300                                                  | 27.5                          | 0.073                         | 0.2                                 | 30                       |
| 300-1,500                                               |                               |                               | f/1500                              | 30                       |
| 1,500-100,000                                           |                               |                               | 1.0                                 | 30                       |

f = frequency in MHz \* = Plane-wave equivalent power density

### 2.2 Assessment methods

Calculation Formula from FCC OET 65:

$$S = \frac{P * G}{4 * \pi * R^2}$$

Where:

- S = Power Density (mW/cm2)
- P = Input Power of the Antenna (mW)
- G = Antenna Gain Relative to an Isotropic Antenna
- R = Distance from the Antenna to the Point of Investigation (cm)

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## 2.3 Test Result

| Operation Mode | Frequency Range (MHz) | Max Conducted Power (dBm) | Antenna Gain (dBi) | Max EIRP (mW) | Power Density at R = 20 cm (mW/cm <sup>2</sup> ) | Limit (mW/cm <sup>2</sup> ) |
|----------------|-----------------------|---------------------------|--------------------|---------------|--------------------------------------------------|-----------------------------|
| BLE            | 2402 ~ 2480           | 2.713                     | 1.20               | 2.462068      | 0.000490                                         | 1.0                         |

**Note(s):**

- 1. For 300 – 1,500MHz: Power Density limit is f/1500 mW/cm2
- 2. For 1,500 – 100,000MHz: Power Density limit is 1.0 mW/cm<sup>2</sup>

## 2.4 Conclusion

The Power Density at the position which is 20 cm far from the EUT is smaller than the General Population/Uncontrolled Exposure limit.

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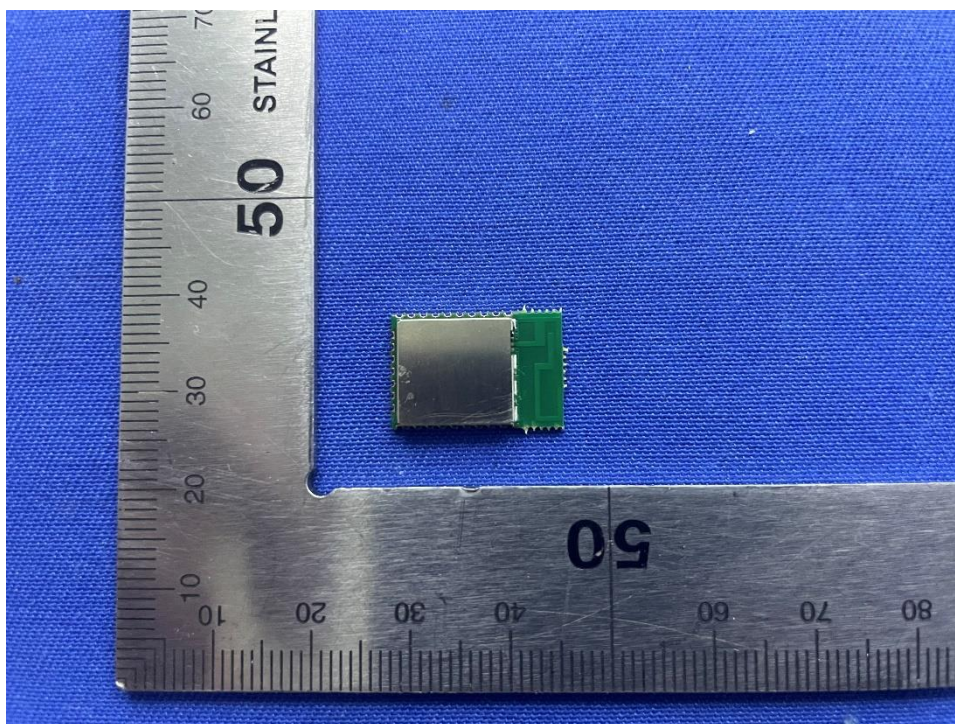
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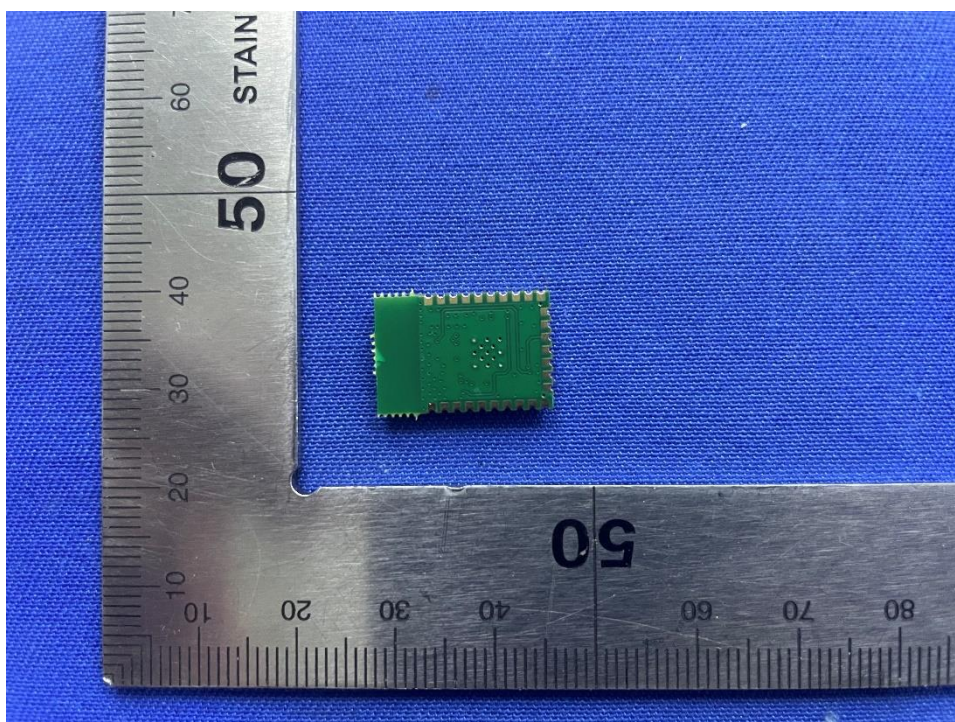
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## 3 Appendixes

### 3.1 Sample Photograph



Front of the sample



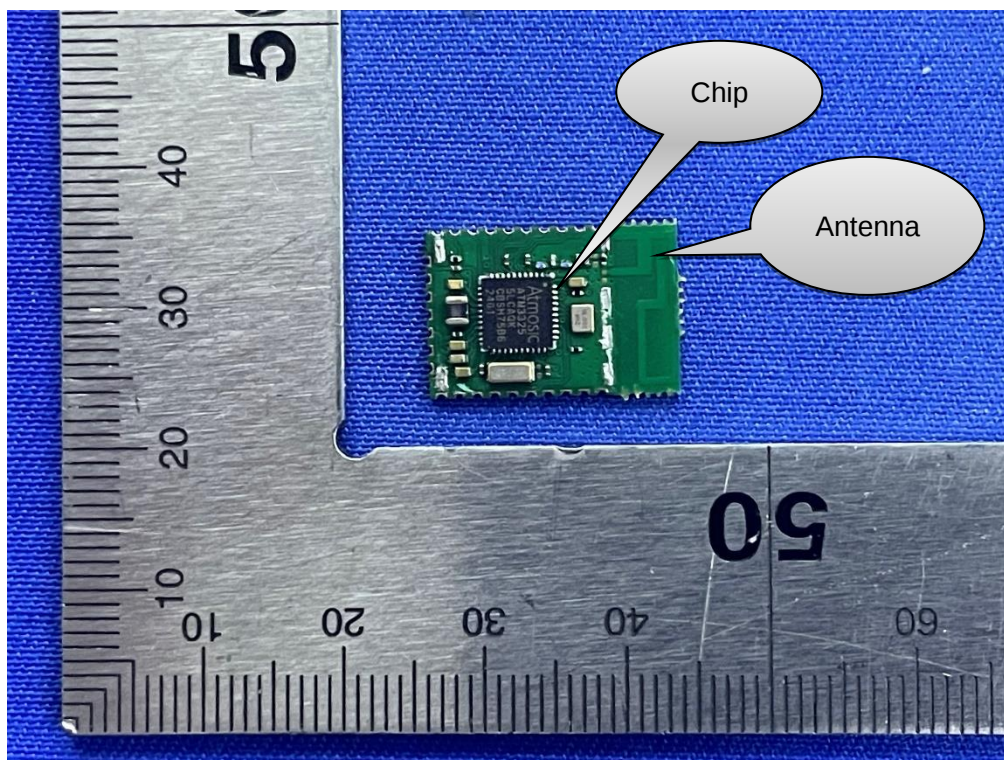
Rear of the sample

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Internal of the sample

\*\*\*End of the report\*\*\*